24. (New) The composite element of claim 19 wherein said bonding comprises chemical bonds between isocyanate groups in said thermoplastic polyurethane and isocyanate-reactive groups in said microcellular polyurethane elastomers.

25. (New) A composite element comprising a thermoplastic polyurethane molding coated with microcellular polyurethane elastomers.

26. (New) A composite element comprising microcellular polyurethane elastomer and a thermoplastic polyurethane layer chemically bonded to at least one surface of said elastomer.

27. (New) The damping element of claim 9 wherein a flexible element of said damping element comprises said elastomer and a rigid element of said damping element comprises said thermoplastic polyurethane.

28. (New) The damping element of claim 9 consisting essentially of polyurethanes.

29. (New) The composite element of claim 1 wherein said bonding comprises chemical bonds between isocyanate groups in said thermoplastic polyurethane and isocyanate-reactive groups in said microcellular polyurethane elastomers.

REMARKS

Applicants respectfully request reconsideration of the present application as amended herein. Upon entry of this amendment, claims 1, 9, 14 and 19-28 are pending in the application. Claims 1, 19, 25 and 26 are independent claims. Arguments made herein are with respect to the application, as amended hereby. Applicants respectfully request reconsideration of the present application in view of the following remarks.

The Examiner objected to claims 9 and 14. Claim 14 has been amended to obviate this objection.

Claims 1, 9 and 14 were rejected under 35 U.S.C. §103 as being unpatentable over Krech et al. in view of Hoppe et al. The Examiner stated:

> Krech is directed to a microcellular polyurethane elastomer with improved dynamic-mechanical characteristics useful in the vibration and shock damping systems of automobiles. Krech discloses a microcellular polyurethane elastomer with a density, tensile strength, elongation at break and tear propagation resistance within the ranges claimed by Applicant.
>
> Krech does not disclose a layer of thermoplastic polyurethane adhered to the microcellular polyurethane elastomer. Hoppe, however, is directed to the

> sealing of an open-cell polyurethane elastomer using a thin, nonporous skin of polyurethane. Hoppe explains that sealing the polyurethane elastomer with a polyurethane skin prevents water, dust and dirt from penetrating into the open-cells of the elastomer (Column 1 lines 18-62). It would have been obvious to a person having ordinary skill in the art at the time this invention was made to combine the teachings or Krech and Hoppe, motivated by the desire to increase the resistance of the microcellular polyurethane elastomer to penetration by water and dirt. *Office Action mailed June 1, 2001, page 3, paragraphs 1 and 2.*

Applicants respectfully traverse the rejection. Applicants submit that the Examiner has failed to establish a *prima facie* case of obviousness of the currently pending claims. The U.S. Patent and Trademark Office bears the burden of establishing a case of *prima facie* obviousness. *In re Bell*, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993). In order to support a rejection under 35 U.S.C. §103, the Office must establish that there is some suggestion, either in the reference or in the relevant art, of how to modify what is disclosed to arrive at the claimed invention. In addition, "[s]omething in the prior art as a whole must suggest the desirability, and, thus, the obviousness, of making" the modification to the art suggested by the Examiner. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051, 5 U.S.P.Q. 2d (BNA) 1434, 1438 (Fed. Cir.), *cert. denied,* 488 U.S. 825 (1988). There must be a teaching in the prior art for the proposed combination or modification to be proper. *In re Newell*, 891 F.2d 899, 13 U.S.P.Q.2d (BNA) 1248 (Fed. Cir. 1989). If the prior art fails to provide this necessary teaching, suggestion, or incentive supporting the Examiner's suggested modification, the rejection based upon this suggested modification is error and must be reversed. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d (BNA) 1566 (Fed. Cir. 1990).

Krech et al. CA 2,240,464 relates to a process for the production of microcellular polyurethane elastomers and the use thereof for producing damping elements. As stated in the present application it is well known that microcellular polyurethane elastomers can be used as a flexible element replacing the rubber in conventional metal and rubber composites. Krech is silent about the use of microcellular polyurethane elastomers as components in composite elements. Krech fails to teach or suggest a composite element comprising a first layer comprising thermoplastic polyurethanes and, bonded thereto a second layer comprising microcellular polyurethane. Hoppe et al. does not remedy this deficiency. Hoppe is directed to a molding of cellular polyurethane elastomer for the production of cushioning elements, wherein

the surface of said elastomer is sealed by a skin of polyurethane in order to prevent water, dust and dirt from penetration into the cellular elastomer. The skin on the surface of the elastomer is created by dip coating or spray coating 1) the mold prior to generating the elastomer molding or 2) the elastomer molding, using polyurethane lacquers. This is a conventional coating and process, well known in the polyurethane arts as useful in making automotive dashboards, steering wheel covers and other components.

Hoppe does not teach or suggest using thermoplastic polyurethane and is silent regarding the nature of the adhesion between the elastomer and the skin. Hoppe fails to teach or suggest a composite element comprising a microcellular polyurethane elastomer layer bonded to a thermoplastic polyurethane layer, a composite element comprising a thermoplastic polyurethane molding coated with microcellular polyurethane elastomers or a composite element comprising a microcellular polyurethane elastomer and a thermoplastic polyurethane layer chemically bonded to at least one surface of said elastomer.

In Applicants' invention, excess isocyanate groups used in the production of the thermoplastic polyurethane layer react with the starting components for the microcellular polyurethane elastomers, when the elastomers are prepared in the presence of the thermoplastic polyurethane layer, producing bonding between the two layers which gives markedly improved adhesion. The Examples in Table 3 show only some separation of the thermoplastic polyurethane from the elastomer at fracture with residues of elastomer still bonded to the thermoplastic polyurethane. This tends to show that the elastomer failed before the bond between the thermoplastic polyurethane and the elastomer. This improved bonding is neither taught nor suggested by the references. Based on the foregoing, Applicants submit that a *prima facie* case of obviousness has not been established. Withdrawal of the §103 rejection and the objection is respectfully requested.

CONCLUSION

Based on the foregoing remarks, Applicants respectfully submit that they have overcome the Examiner's rejection and that the claims are in a condition suitable for allowance. A Notice to that effect is respectfully solicited. Should the Examiner have any questions, please contact the undersigned attorney.

Respectfully submitted,

Date: _____

Mary K. Cameron
Attorney for Applicants
Registration No. 34,789

BASF Corporation
1609 Biddle Ave.
Wyandotte, MI 48192-3736
(734) 324-6197

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APPENDIX

1. (Twice amended) Composite elements comprising

(i) a first layer comprising thermoplastic polyurethanes and, [adhered] bonded thereto

(ii) a second layer comprising microcellular polyurethane elastomers having a density of from 300 to 700 kg/m^3, a tensile strength to DIN 53571 of from 3 to 8 N/mm^2, an elongation at break to DIN 53571 of from 350 to 550%, a tear propagation resistance to DIN 53515 of from 8 to 30 N/mm and a rebound resilience to DIN 53512 of from 50 to 60%.

14. (Twice amended) The composite element as claimed in claim 1 comprising a damping element [in automotive construction]selected from the group consisting of transverse link bearings, rear-axle subframe bearings, stabilizer bearings, longitudinal link bearings, spring-strut support bearings, shock-absorber bearings and bearings for triangular links.